

catalysts as taught by *Bidell et al.* in the injection stretch blow molding process taught by *Oas et al.*

However, the teaching of *Bidell et al.* is primarily concerned with providing a catalyst which exhibits an improved productivity²⁾. With regard to the propylene polymers which are obtained in the presence of the catalyst, *Bidell et al.* merely provides that such polymers have "good polymer morphology" and "uniform polymer chain lengths"³⁾. As such, the disclosure of *Bidell et al.* neither suggests nor implies that propylene polymers which are obtained in the presence of the requisite catalyst exhibit any properties which distinguish them from the multitude of polypropylenes known in the art. Moreover, the disclosure of *Bidell et al.* provides no information whatsoever which would motivate a person of ordinary skill to specifically select a propylene polymer which is obtained in the presence of a catalyst comprising the metal compound represented by formula (IIIc) for use in an injection stretch blow molding process.

Applicants have found that the propylene polymers which are obtained in the presence of a catalyst comprising the metal compound represented by formula (IIIc) provide distinct and unexpected advantages when used in an injection stretch blow molding process.

One major problem which is encountered in the injection stretch blow molding process lies in the requirement that precisely specified, narrow temperature ranges have to be maintained during the process to obtain transparent containers⁴⁾. In the case of propylene polymers even small deviations from the specific temperature range impair the properties of the product and cause losses⁵⁾. Applicants have found that the utilization of the particular propylene polymer defined in Claim 1 significantly enlarges the temperature range at which transparent containers can be obtained in the injection stretch blow molding process. As shown in Example 1⁶⁾, a temperature range of 8°C resulted when the particular propylene homopolymer defined in

2) For example *US 6,265,339*, col. 1, indicated lines 41 to 43: "It is an object of the present invention to find a process for preparing supported transition metal catalysts which leads to catalysts of higher productivity", and col. 10, indicated lines 38 to 42: "The polymerization process ... gives ... no deposit formation, no agglomerate formation and good productivity."

3) *US 6,265,339*, col. 10, indicated lines 39 and 40.

4) Page 2, indicated lines 24 to 27, of the application.

5) Page 2, indicated lines 27 to 36, of the application.

6) Page 19, indicated lines 27 to 42, of the application, particularly indicated lines 40 to 42.

Claim 1 was employed in the injection stretch blow molding process whereas, as shown in Example A⁷⁾, the temperature range was only 2°C when a conventional propylene homopolymer was employed. Correspondingly, as shown in Example 2⁸⁾, a temperature range of 12°C resulted when the particular propylene copolymer defined in Claim 1 was employed in the injection stretch blow molding process whereas, as shown in Example B⁹⁾, the temperature range was only 6°C when a conventional propylene copolymer was employed.

Another major problem which is encountered in the injection stretch blow molding process of propylene polymers lies in the presence of soluble fractions which impair the mechanical properties of the blow molded container and cause losses¹⁰⁾. Applicants have found that soluble fractions are avoided when the particular propylene polymer defined in Claim 1 is employed in the injection stretch blow molding process. As shown in Example 1¹¹⁾, no soluble fractions were present when the particular propylene homopolymer defined in Claim 1 was employed in the injection stretch blow molding process whereas, as shown in Example A¹²⁾, 3% by weight of soluble fractions were observed when a conventional propylene homopolymer was employed. Correspondingly, as shown in Example 2¹³⁾, no soluble fractions were present when the particular propylene copolymer defined in Claim 1 was employed in the injection stretch blow molding process whereas, as shown in Example B¹⁴⁾, 6.5% by weight of soluble fractions were observed when a conventional propylene copolymer was employed.

As the Court emphasized in In re Antonie¹⁵⁾ the invention as a whole which is pertinent in a determination under Section 103(a) is

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- 7) Page 20, indicated lines 14 to 25, of the application, particularly indicated lines 23 to 25.
 - 8) Page 20, indicated lines 1 to 12, of the application, particularly indicated lines 10 to 12.
 - 9) Page 20, indicated lines 27 to 38, of the application, particularly indicated lines 36 to 38.
 - 10) Page 1, indicated line 42, to page 2, indicated line 16, of the application.
 - 11) Page 19, indicated lines 27 to 42, of the application, particularly indicated lines 33 to 36.
 - 12) Page 20, indicated lines 14 to 25, of the application, particularly indicated lines 20 to 22.
 - 13) Page 20, indicated lines 1 to 12, of the application, particularly indicated lines 4 to 6.
 - 14) Page 20, indicated lines 27 to 38, of the application, particularly indicated lines 34 and 35.
 - 15) 559 F.2d 618, 195 USPQ 6 (CCPA 1977)

not limited to the features and requirements literally recited in the claim, but also includes properties of the recited features and requirements which are an inherent result of the particular combination recited in the claim and which are addressed in the specification. Also, obviousness cannot be predicated on what is not known at the time an invention is made, even if the inherency of a certain feature is later established¹⁶). Accordingly, the particular and distinct advantages which are addressed and illustrated in applicants' description clearly constitute a part of applicants' invention as a whole which is pertinent in a determination under Section 103(a). The teaching of *Oas et al.* fails to indicate parameter(s) which have an influence on the temperature range which has to be maintained during the injection stretch blow process to obtain transparent containers. A person of ordinary skill in the art, therefore, finds no guidance in the teaching of *Oas et al.* how to proceed in order to arrive at an enlarged range of the critical temperature. The disclosure of *Bidell et al.* does not address the intricacies involved in injection stretch blow molding processes of propylene polymers and is, therefore, unsuitable to suggest or imply measures which can be taken to improve the breadth of the temperature range. Similarly, the teaching of *Oas et al.* fails to indicate parameter(s) which have an influence on the content of extractable fractions. A person of ordinary skill in the art, therefore, finds no guidance in the teaching of *Oas et al.* how to proceed in order to obviate the problems caused by those fractions. The disclosure of *Bidell et al.* does not address the intricacies involved in injection stretch blow molding processes of propylene polymers and is, therefore, equally unsuitable to suggest or imply measures which can be taken in this regard. The teaching of *Oas et al.* when taken in view of the disclosure of *Bidell et al.* therefore fails to render applicants' invention as a whole obvious within the meaning of Section 103(a).

In light of the foregoing, it is respectfully requested that the rejection be withdrawn. Favorable action is solicited.

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16) In re Rijckaert, 9 F.3d 1531, 28 USPQ2d 1955 (CAFC 1993)

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Respectfully submitted,

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